

## CLAIMS

What is claimed is:

- 1 1. A method for monitoring a messaging system, the method comprising the computer-  
2 implemented steps of:  
3 receiving, at an endpoint, a message from a first agent for forwarding to the  
4 messaging system, wherein the endpoint is registered with the messaging  
5 system and is configured to forward incoming messages to the messaging  
6 system;  
7 determining, by a second agent that is associated with the endpoint, whether the  
8 endpoint receives a message notification from the messaging system in  
9 response to the message.
- 1 2. The method of claim 1, further comprising the computer-implemented step of:  
2 if the endpoint receives the message notification, then determining how much time  
3 elapses between arrival of the message at the endpoint and reception of the  
4 message notification at the endpoint.
- 1 3. The method of claim 1, further comprising the computer-implemented step of:  
2 attempting to access, by the second agent, a message repository associated with the  
3 messaging system.
- 1 4. The method of claim 3, further comprising the computer-implemented steps of:  
2 upon accessing the message repository, attempting to retrieve the message as e-mail  
3 from the message repository using a client application that is associated with  
4 the messaging system.

- 1     5.     The method of claim 3, further comprising the computer-implemented step of:  
2           upon accessing the message repository, attempting to retrieve the message from the  
3           message repository.
- 1     6.     The method of claim 5, wherein the message is an audio message and wherein the  
2           method further comprises the computer-implemented step of:  
3           upon retrieving the message, playing the message using an interface to the messaging  
4           system.
- 1     7.     The method of claim 5, further comprising the computer-implemented steps of:  
2           upon retrieving the message, comparing the message retrieved from the message  
3           repository with a copy of the message that was sent from the first agent; and  
4           based on the comparing, determining whether the message retrieved from the  
5           message repository is degraded.
- 1     8.     The message of claim 1, further comprising the computer-implemented steps of:  
2           accessing, by the second agent, a message repository associated with the messaging  
3           system;  
4           retrieving the message from the message repository;  
5           comparing the message retrieved from the message repository with a copy of the  
6           message that was sent from the first agent; and  
7           based on the comparing, determining whether the message retrieved from the  
8           message repository is degraded in quality.
- 1     9.     The method of claim 8, further comprising the computer-implemented step of:

2           upon determining that the message retrieved from the message repository is degraded,  
3                   determining why the message retrieved from the repository is degraded.

1    10.    The method of claim 1, further comprising the computer-implemented step of:  
2           registering the first agent and the second agent as telephony endpoints on a network.

1    11.    The method of claim 1, wherein the messaging system is a Unified Messaging  
2           system.

1    12.    The method of claim 1, wherein the message is received from a packet-switched  
2           communication network.

1    13.    The method of claim 1, wherein the first agent and the second agent are synthetic  
2           phones.

1    14.    The method of claim 1, wherein the message transmitted from the first agent is an  
2           audio message.

1    15.    The method of claim 1, wherein the message transmitted from the first agent is an e-  
2           mail message.

1    16.    The method of claim 1, wherein the message transmitted from the first agent is a  
2           facsimile message.

1    17.    The method of claim 1,  
2           wherein the steps of transmitting include multicasting a signal and multicasting a  
3           message to a plurality of telephony endpoints on a network; and

4 wherein the step of determining includes determining, by each of a plurality of agents  
5 that are each associated with a respective endpoint of the plurality of  
6 endpoints, whether the associated endpoint receives a message notification in  
7 response to the message.

1 18. The method of claim 1, further comprising the step of transmitting after specified  
2 intervals.

1 19. The method of claim 1, wherein the steps of the method are performed at a gateway  
2 only.

1 20. A computer-readable medium carrying one or more sequences of instructions for  
2 monitoring a messaging system, which instructions, when executed by one or more  
3 processors, cause the one or more processors to carry out the steps of:  
4 receiving, at an endpoint, a message from a first agent for forwarding to the  
5 messaging system, wherein the endpoint is registered with the messaging  
6 system and is configured to forward incoming messages to the messaging  
7 system;  
8 determining, by a second agent that is associated with the endpoint, whether the  
9 endpoint receives a message notification from the messaging system in  
10 response to the message.

1 21. The computer-readable medium of claim 20, wherein the instructions cause the  
2 processors to carry out the further step of:

3 if the endpoint receives the message notification, then determining how much time  
4 elapses between arrival of the message at the endpoint and reception of the  
5 message notification at the endpoint.

1 22. The computer-readable medium of claim 20, wherein the instructions cause the  
2 processors to carry out the further step of:  
3 attempting to access, by the second agent, a message repository associated with the  
4 messaging system.

1 23. The computer-readable medium of claim 22, wherein the instructions cause the  
2 processors to carry out the further step of:  
3 upon accessing the message repository, attempting to retrieve the message as e-mail  
4 from the message repository using a client application that is associated with  
5 the messaging system.

1 24. The computer-readable medium of claim 22, wherein the instructions cause the  
2 processors to carry out the further step of:  
3 upon accessing the message repository, attempting to retrieve the message from the  
4 message repository.

1 25. The computer-readable medium of claim 24, wherein the message is an audio  
2 message and wherein the instructions cause the processors to carry out the further  
3 step of:  
4 upon retrieving the message, playing the message using an interface to the messaging  
5 system.

- 1    26.    The computer-readable medium of claim 24, wherein the instructions cause the  
2           processors to carry out the further steps of:  
3           upon retrieving the message, comparing the message retrieved from the message  
4           repository with a copy of the message that was sent from the first agent; and  
5           based on the comparing, determining whether the message retrieved from the  
6           message repository is degraded.
- 1    27.    The computer-readable medium of claim 20, wherein the instructions cause the  
2           processors to carry out the further steps of:  
3           accessing, by the second agent, a message repository associated with the messaging  
4           system;  
5           retrieving the message from the message repository;  
6           comparing the message retrieved from the message repository with a copy of the  
7           message that was sent from the first agent; and  
8           based on the comparing, determining whether the message retrieved from the  
9           message repository is degraded in quality.
- 1    28.    The computer-readable medium of claim 27, wherein the instructions cause the  
2           processors to carry out the further step of:  
3           upon determining that the message retrieved from the message repository is degraded,  
4           determining why the message retrieved from the repository is degraded.
- 1    29.    The computer-readable medium of claim 20, wherein the instructions cause the  
2           processors to carry out the further step of:  
3           registering the first agent and the second agent as telephony endpoints on a network.

- 1 30. The computer-readable medium of claim 20, wherein the messaging system is a  
2 Unified Messaging system.
- 1 31. The computer-readable medium of claim 20, wherein the message is received from a  
2 packet-switched communication network.
- 1 32. The computer-readable medium of claim 20, wherein the first agent and the second  
2 agent are synthetic phones.
- 1 33. The computer-readable medium of claim 20, wherein the message transmitted from  
2 the first agent is an audio message.
- 1 34. The computer-readable medium of claim 20, wherein the message transmitted from  
2 the first agent is an e-mail message.
- 1 35. The computer-readable medium of claim 20, wherein the message transmitted from  
2 the first agent is a facsimile message.
- 1 36. The computer-readable medium of claim 20,  
2 wherein the steps of transmitting include multicasting a signal and multicasting a  
3 message to a plurality of telephony endpoints on a network; and  
4 wherein the step of determining includes determining, by each of a plurality of agents  
5 that are each associated with a respective endpoint of the plurality of  
6 endpoints, whether the associated endpoint receives a message notification in  
7 response to the message.

- 1 37. The computer-readable medium of claim 20, wherein the instructions cause the  
2 processors to carry out the step of transmitting after specified intervals.
- 1 38. The computer-readable medium of claim 20, wherein the steps of the method are  
2 performed at a gateway only.
- 1 39. A system for monitoring a messaging system, the system comprising:  
2 means for receiving, at an endpoint, a message from a first agent for forwarding to the  
3 messaging system, wherein the endpoint is registered with the messaging  
4 system and is configured to forward incoming messages to the messaging  
5 system;  
6 means for determining, by a second agent that is associated with the endpoint,  
7 whether the endpoint receives a message notification from the messaging  
8 system in response to the message.
- 1 40. A system that can monitor a messaging system, the system comprising:  
2 a network interface;  
3 a processor coupled to the network interface and receiving messages from a network  
4 through the network interface;  
5 a computer-readable medium comprising one or more stored sequences of  
6 instructions which, when executed by the processor, cause the processor to  
7 carry out the steps of:  
8 receiving, at an endpoint, a message from a first agent for forwarding to the  
9 messaging system, wherein the endpoint is registered with the



10                   messaging system and is configured to forward incoming messages to  
11                   the messaging system;  
12           determining, by a second agent that is associated with the endpoint, whether  
13           the endpoint receives a message notification from the messaging  
14           system in response to the message.